

Forestland Interpretations

Forestland interpretations are important to good management. The management of trees begins with an understanding of the soil where they grow or are to be grown. Some soils are very suitable for growing wood crops; others barely support tree cover. Different tree species may vary in production on the same soil.

Forestland interpretations should be used to assist land users in planning, installing, and maintaining forestland management systems.

Forest Management and Productivity

The Forestland Management and Productivity tables presents information about suitable for producing timber for each soil map unit. Management concerns, which include hand planting, mechanical planting, use of harvesting equipment, mechanical site preparation (surface), roads (natural surface), erosion on roads and trails, off-road/trail erosion, soil rutting, log landings, seedling survival, are listed by ratings of:

- Not Limited (0.00)
- Slightly Limited (0.01 to 0.30)
- Moderately Limited (0.31 to 0.60)
- Limited (0.61 to 0.99)
- Very Limited (1.00)

Information on potential productivity includes plant competition, common trees, site index, productivity class, and trees to plant.

Management Concerns

PLANT COMPETITION - A rating of slight indicates little or no competition from other plants; moderate indicates that plant competition is expected to hinder the development of the fully stocked stand of desirable trees; and severe means that plant competition is expected to prevent the establishment of a desirable stand unless the site is intensively prepared, weeded, or otherwise managed for the control of undesirable plants.

POTENTIAL PRODUCTIVITY - This is discussed under the ordination class symbol.

COMMON TREES - Trees that generally occur on the soil are listed regardless of economic importance.

SITE INDEX AND PRODUCTIVITY CLASS - These are discussed under ordination class symbol.

TREES TO PLANT - Trees that are suitable for commercial wood production and that are adapted to the soil.

HAND PLANTING – ratings are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, a water table, and ponding. Ratings indicate the expected difficulty of hand planting, which includes the proper placement of root systems of tree seedlings to a depth of up to 12 inches, using standard hand planting tools. It is assumed that necessary site preparation is completed before seedlings are planted.

MECHANICAL PLANTING – ratings are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, a water table, and ponding. Ratings indicate the expected difficulty using a mechanical planter, which includes proper placement of root systems of tree seedlings to a depth up to 12 inches. It is assumed that necessary site preparation is completed before seedlings are planted.

USE OF HARVEST EQUIPMENT – ratings are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, a water table, and ponding. Ratings indicate the suitability for operating harvest equipment for off-road transport or harvest of logs and/or wood products by ground-based wheeled or tracked equipment.

MECHANICAL SITE PREPARATION (SURFACE) – ratings are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, a water table, and ponding. The part of the soil from the surface to a depth of about 12 inches is considered in the ratings. Ratings indicate the suitability of using surface-altering soil tillage equipment to prepare the site for planting or seeding.

ROADS (NATURAL SURFACE) – ratings are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads on which trucks transport logs and other wood products from the site.

EROSION (ROAD/TRAIL) – ratings are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails.

EROSION (OFF-ROAD/OFF-TRAIL) – ratings are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

SOIL RUTTING – ratings are based on a water table, rock fragments on or below the surface, surface texture, depth to a restrictive layer, and slope. Ratings indicate the hazard or risk of ruts in the uppermost soil surface layers by operation of forest equipment. Soil displacement and puddling (soil deformation and compaction) may occur simultaneously with rutting.

LOG LANDINGS – ratings are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, a water table, ponding, flooding, and the hazard of soil slippage. Ratings indicate the suitability of the soil at the forest site to serve as a log landing and allows the efficient and effective use of equipment for the temporary storage and handling of logs.

SEEDLING SURVIVAL – ratings are based on flooding, ponding, a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. Ratings indicate the impact of soil, physiographic, and climatic conditions on the survivability of newly established tree seedlings.

See the National Forestry Manual, Subpart B for criteria used in rating management concerns.

This subsection includes:

- **(a) Forest Management (one or two tables)**

Stoddard County, Missouri
Forest Productivity

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
1C:				
Brandon-----	black oak-----	70	57	eastern white pine,
	chestnut oak-----	---	0	loblolly pine,
	hickory-----	---	0	northern red oak,
	scarlet oak-----	69	57	shortleaf pine,
	southern red oak----	71	57	white oak
	tuliptree-----	80	72	
	white oak-----	61	43	
1D:				
Brandon-----	black oak-----	70	57	eastern white pine,
	chestnut oak-----	---	0	loblolly pine,
	hickory-----	---	0	northern red oak,
	scarlet oak-----	69	57	shortleaf pine,
	southern red oak----	71	57	white oak
	tuliptree-----	80	72	
	white oak-----	61	43	
3B:				
Loring-----	cherrybark oak-----	86	100	cherrybark oak,
	loblolly pine-----	85	114	loblolly pine,
	southern red oak----	74	57	shortleaf pine,
	sweetgum-----	90	100	southern red oak,
	water oak-----	82	72	tuliptree
3C2:				
Loring, ERODED-----	cherrybark oak-----	86	100	cherrybark oak,
	loblolly pine-----	85	114	loblolly pine,
	southern red oak----	74	57	shortleaf pine,
	sweetgum-----	90	100	southern red oak,
	water oak-----	82	72	tuliptree

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Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
3C3: Loring, SEVERELY ERODED-	cherrybark oak-----	86	100	cherrybark oak,
	loblolly pine-----	85	114	loblolly pine,
	southern red oak----	74	57	shortleaf pine,
	sweetgum-----	90	100	southern red oak,
	water oak-----	82	72	tuliptree
3D2: Loring, ERODED-----	cherrybark oak-----	86	100	cherrybark oak,
	loblolly pine-----	85	114	loblolly pine,
	southern red oak----	74	57	shortleaf pine,
	sweetgum-----	90	100	southern red oak,
	water oak-----	82	72	tuliptree
3D3: Loring, SEVERELY ERODED-	cherrybark oak-----	86	100	cherrybark oak,
	loblolly pine-----	85	114	loblolly pine,
	southern red oak----	74	57	shortleaf pine,
	sweetgum-----	90	100	southern red oak,
	water oak-----	82	72	tuliptree
5C2: Memphis, ERODED-----	cherrybark oak-----	90	114	cherrybark oak,
	loblolly pine-----	90	129	loblolly pine,
	sweetgum-----	90	100	tuliptree
5C3: Memphis, SEVERELY ERODED	cherrybark oak-----	90	114	cherrybark oak,
	loblolly pine-----	90	129	loblolly pine,
	sweetgum-----	90	100	tuliptree

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Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
5D3: Memphis, SEVERELY ERODED	cherrybark oak----- loblolly pine----- sweetgum-----	90 90 90	114 129 100	cherrybark oak, loblolly pine, tuliptree
5F: Memphis-----	cherrybark oak----- loblolly pine----- sweetgum-----	90 90 90	114 129 100	cherrybark oak
6F: Eustis-----	blackjack oak----- bluejack oak----- loblolly pine----- longleaf pine----- post oak----- slash pine----- turkey oak-----	--- --- 80 65 --- 80 ---	0 0 114 72 0 143 0	---
Memphis-----	cherrybark oak----- loblolly pine----- sweetgum-----	90 90 90	114 129 100	cherrybark oak
13B: Askew-----	cherrybark oak----- eastern cottonwood-- Nuttall oak----- sweetgum----- water oak----- willow oak-----	90 100 90 90 90 90	114 129 86 100 86 86	cherrybark oak, Nuttall oak, water oak
15D: Goss-----	---	---	---	---

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Forest Productivity

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
15F: Goss-----	black oak----- blackjack oak----- post oak----- shortleaf pine----- white oak-----	--- --- --- --- 60	0 0 0 0 43	green ash, sweetgum, tuliptree
16C2: Shadygrove, ERODED-----	loblolly pine----- shortleaf pine----- sweetgum-----	80 70 80	114 114 86	loblolly pine, slash pine
39: Pits-----	---	---	---	---
45: Canalou, RARELY FLOODED-	black oak----- eastern cottonwood-- pin oak----- shortleaf pine----- sweetgum-----	--- 86 80 --- ---	0 86 57 0 0	American sycamore, eastern cottonwood, eastern white pine, loblolly pine, pin oak, shortleaf pine, sweetgum
51: Allemands, RARELY FLOODED-----	---	---	---	---

Stoddard County, Missouri
Forest Productivity

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
52: Kobel, OCCASIONALLY FLOODED-----	American sycamore---	---	0	American sycamore,
	cherrybark oak-----	85	100	cherrybark oak,
	eastern cottonwood--	90	100	eastern
	green ash-----	100	57	cottonwood, water
	pecan-----	---	0	oak
	sweetgum-----	90	100	
	water oak-----	90	86	
55: Amagon, RARELY FLOODED--	cherrybark oak-----	90	114	cherrybark oak,
	eastern cottonwood--	100	129	eastern
	green ash-----	80	57	cottonwood,
	Nuttall oak-----	100	143	Nuttall oak,
	water oak-----	100	100	Shumard's oak,
	willow oak-----	100	100	water oak, willow
				oak
57B2: Bosket, ERODED-----	cherrybark oak-----	90	114	cherrybark oak,
	eastern cottonwood--	100	129	eastern
	green ash-----	80	57	cottonwood,
	sweetgum-----	90	100	shortleaf pine,
	water oak-----	90	86	sweetgum
	willow oak-----	90	86	

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Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
57C3: Bosket, SEVERELY ERODED-	cherrybark oak-----	90	114	cherrybark oak, eastern cottonwood, shortleaf pine, sweetgum
	eastern cottonwood--	100	129	
	green ash-----	80	57	
	sweetgum-----	90	100	
	water oak-----	90	86	
	willow oak-----	90	86	
57D3: Bosket, SEVERELY ERODED-	cherrybark oak-----	90	114	cherrybark oak, eastern cottonwood, shortleaf pine, sweetgum
	eastern cottonwood--	100	129	
	green ash-----	80	57	
	sweetgum-----	90	100	
	water oak-----	90	86	
	willow oak-----	90	86	
59B: Broseley-----	eastern cottonwood--	80	86	eastern cottonwood, pin oak
	pin oak-----	70	57	
61: Calhoun-----	loblolly pine-----	90	129	green ash, loblolly pine, water oak
	shortleaf pine-----	84	143	
	sweetgum-----	---	0	
63: Commerce, RARELY FLOODED	American sycamore---	---	0	cherrybark oak, pecan, Shumard's oak, water oak
	eastern cottonwood--	120	186	
	green ash-----	100	100	
	Nuttall oak-----	90	0	
	pecan-----	---	0	
	water oak-----	110	114	
	willow oak-----	---	0	

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Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
64: Convent, RARELY FLOODED-	American sycamore----	---	0	cherrybark oak, pecan, Shumard's oak, water oak
	eastern cottonwood--	120	186	
	green ash-----	80	43	
	Nuttall oak-----	90	0	
	pecan-----	---	0	
	sweetgum-----	110	172	
	water oak-----	---	0	
65: Crowley-----	loblolly pine-----	83	114	loblolly pine, shortleaf pine
	shortleaf pine-----	---	0	
67: Dundee-----	cherrybark oak-----	105	172	cherrybark oak, eastern cottonwood, sweetgum, tuliptree, water oak
	eastern cottonwood--	100	129	
	sweetgum-----	100	143	
	water oak-----	95	86	
68: Waverly, OCCASIONALLY FLOODED-----	cherrybark oak-----	100	143	American sycamore, cherrybark oak, eastern cottonwood, loblolly pine, sweetgum, water oak, water tupelo, willow oak
	eastern cottonwood--	105	143	
	loblolly pine-----	95	143	
	Nuttall oak-----	100	0	
	sweetgum-----	100	143	
	water oak-----	95	86	
	willow oak-----	95	86	

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Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
69: Falaya, OCCASIONALLY FLOODED-----	cherrybark oak----- eastern cottonwood-- green ash----- loblolly pine----- Nuttall oak----- water oak-----	100 100 90 90 110 100	157 129 129 129 100 100	cherrybark oak, eastern cottonwood, green ash, sweetgum, tuliptree
71: Gideon, OCCASIONALLY FLOODED-----	baldcypress----- eastern cottonwood-- sweetgum-----	--- 96 ---	0 114 0	American sycamore, baldcypress, eastern cottonwood, sweetgum, water oak
73: Lilbourn, RARELY FLOODED	baldcypress----- eastern cottonwood-- pin oak-----	--- 90 80	0 0 57	baldcypress, eastern cottonwood, green ash, pin oak
74B: Malden-----	shortleaf pine-----	70	114	black oak, loblolly pine, shortleaf pine
75B: Malden-----	shortleaf pine-----	70	114	black oak, loblolly pine, shortleaf pine

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Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
76: Mhoon, OCCASIONALLY FLOODED-----	American sycamore----	100	143	green ash, Nuttall oak, water oak
	eastern cottonwood--	110	157	
	green ash-----	90	57	
	sweetgum-----	---	0	
	water oak-----	---	0	
77: Roellen, OCCASIONALLY FLOODED-----	cherrybark oak-----	90	114	eastern cottonwood, sweetgum
	eastern cottonwood--	100	129	
	sweetgum-----	90	100	
	water oak-----	90	86	
80: Sharkey, OCCASIONALLY FLOODED-----	green ash-----	98	86	green ash, Nuttall oak
	honeylocust-----	---	0	
	Nuttall oak-----	---	0	
	overcup oak-----	---	0	
	sugarberry-----	---	0	
	sweetgum-----	---	0	
	water hickory-----	---	0	

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Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
81: Sharkey, OCCASIONALLY FLOODED-----	green ash-----	98	86	green ash, Nuttall oak
	honeylocust-----	---	0	
	Nuttall oak-----	---	0	
	overcup oak-----	---	0	
	sugarberry-----	---	0	
	sweetgum-----	---	0	
	water hickory-----	---	0	
83: Sikeston, OCCASIONALLY FLOODED-----	baldcypress-----	---	0	American sycamore, eastern cottonwood, pin oak, sweetgum, water oak
	eastern cottonwood--	100	129	
	pin oak-----	95	72	
	sweetgum-----	95	114	
85: Wardell, RARELY FLOODED-	eastern cottonwood--	90	100	eastern cottonwood, pecan, pin oak, sweetgum
	pin oak-----	80	57	
87B: Dubbs-----	cherrybark oak-----	100	143	American sycamore, eastern cottonwood, green ash, Nuttall oak, sweetgum, tuliptree
	eastern cottonwood--	100	129	
	green ash-----	80	57	
	Nuttall oak-----	95	0	
	Shumard's oak-----	100	72	
	sweetgum-----	95	114	
	water oak-----	90	86	
	willow oak-----	95	86	

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Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
89: Foley-----	cherrybark oak-----	80	86	cherrybark oak, sweetgum, water oak
	sweetgum-----	80	86	
	water oak-----	80	72	
91: Forestdale, OCCASIONALLY FLOODED-----	cherrybark oak-----	94	129	American sycamore, eastern cottonwood, green ash, Nuttall oak, sweetgum
	eastern cottonwood--	100	129	
	green ash-----	78	43	
	Nuttall oak-----	99	0	
	sweetgum-----	100	143	
	water oak-----	90	86	
	willow oak-----	94	86	
93: Collins, OCCASIONALLY FLOODED-----	cherrybark oak-----	110	57	cherrybark oak, eastern cottonwood, green ash
	eastern cottonwood--	115	0	
	green ash-----	95	57	
95: Farrenburg, RARELY FLOODED-----	baldcypress-----	---	0	American sycamore, eastern cottonwood, pin oak
	eastern cottonwood--	96	0	
	pin oak-----	86	72	
	sweetgum-----	---	0	

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Forest Productivity

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
97: Zachary, OCCASIONALLY FLOODED-----	eastern cottonwood--	100	129	baldcypress, eastern cottonwood, green ash, sweetgum
99: Tuckerman, OCCASIONALLY FLOODED-----	cherrybark oak-----	100	143	cherrybark oak,
	eastern cottonwood--	95	114	eastern
	green ash-----	100	86	cottonwood,
	Nuttall oak-----	95	129	Nuttall oak,
	sweetgum-----	---	0	sweetgum, water
	water oak-----	95	86	oak, willow oak
	willow oak-----	95	86	
M-W: Water-----	---	---	---	---
W: Water-----	---	---	---	---